Sri Venkateswara College of Engineering

Newsletter

The Catalyst

(Accelerating your Growth rate)

Volume - 2, Issue - III, March, 2023

Department of Chemical Engineering

Vision

To be a leader in Chemical Engineering Education and Research by providing balanced learning and fostering research to enable the learners to meet the challenges of process industries and societal needs.

Mission

The Department of Chemical Engineering strives to produce graduates who practice Chemical Engineering professionally and ethically in a competitive global environment and contribute to the betterment of society, thereby focusing on the development of engineers to foster innovation through proficiency and effective communication.

Motivation: Alumni page

Proud Alumnus:
Shmt. Priyadharsini Swaminathan,
B.Tech Chemical Engineering
(2000-2004)

Process Engineering Lead
ExxonMobil
USA.

Pursuing my bachelor's degree in SVCE has helped pave the way to my life and career paths. Those four years not only provided me the foundation in my engineering fundamentals but also provided me the opportunity to network with so many remarkable people. I followed with a Master's degree in the US and have been employed with some of the top companies here in the Energy industry including GE, WOOD, Linde. Currently I am on an expatriate assignment in Europe for a 10 billion dollar project with ExxonMobil, world's largest international oil and gas Company. Along the way, I have faced several challenges — times when I missed opportunities, deadlines, or the work-life balance simply didn't work. Key thing is the ability to adapt, break down barriers, and overcome the challenges experienced along the way. It has been a privilege to have the support and mentorship of several friends from alumni and peers in the industry. As I continue my journey towards advancing technologies, improving quality of life and developing solutions to complex problems, I encourage you – The future leaders to pursue your dreams in shaping the future of our world. May you relentlessly break down barriers to bring the change you want to see.

Journal Publication:

Dr. R. Govindarasu, Associate Professor and Assistant HOD, and Dr. V. Divya, Assistant Professor, has reported a paper acceptance for publication,in the Springer journal of Biomass Conversion and Biorefinery; titled "INTENSIFIED EXTRACTION OF GERANIOL FROM PALMAROSA LEAVES USING DIVERSE HYDROTROPE ASSISTED EXTRACTION TECHNIQUES". DOI:10.1007/s13399-023-04108-w

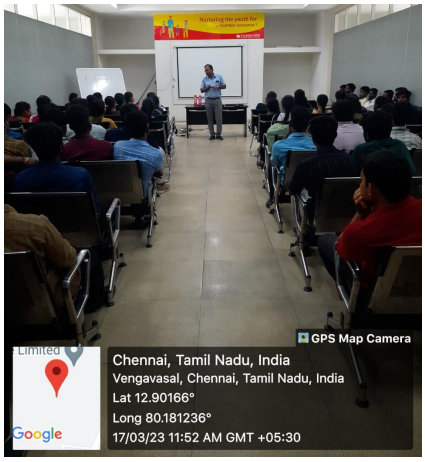
SVCE Faculty as Resource Person:

Dr. R. Rajesh @ Nithyanandam , Associate professor, Department of Chemical Engineering, gave a guest lecture on " An overview of adsorption column " dated : 11.03.2023 in St. Michael college of engineering and technology, Kalayarkoil, Tamil Nadu.

Dr. N.P. Kavitha, Assistant Professor, has delivered a keynote address and chaired a session at The International conference on "Membrane Assisted Water purification process" at Mahatma Gandhi University, Kottayam, Kerala, India; on 11th March 2023.

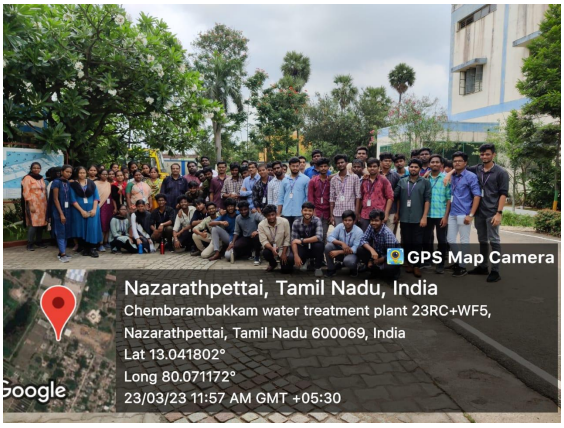
Sponsored Industrial Visit: Balanced Learning

1) **Second years visit to kaleesuwari refineries Medavakkam on 17th March 2023.**



2) **Second years visit to MCSM Sugar mill, madhuranthagam on 27th March 2023**

3) **Two students from each year of B.Tech Chemical Engineering, visited IIT Madras Research park workshop which is organized by institution innovative council on 13th March 2023**



4) **Third years visited Chembarambakkam Water Treatment Plant on 23rd March 2023.**

Recent Campus Placements:

The students were placed during campus placement activity as " Graduate Engineer Trainee " at "BGR Energy, Chennai; and in KBR, Chennai. These students have decorated the “Wall of Names”

Fostering Research: Awards & Achievements:

The following students have reported the participation in technical events during the month of March 2023, with the guidance from Dr. M.Srividhya and Dr. V. Divya, and their names have been decorated in the wall of names below.

Extracurricular activities: **Maperum tamil kanavu**

A GoI initiative to impart the cultural and historical heritage of tamil nation on account of former chief minister Shri.C.N Anna Durai . As part of it our college tamil mandram conducted an event on the same theme by 30th April 2023. Students of our department had actively took part in the event and we're awarded with certificates.

Programmes run by the Department of Chemical Engineering are,

- **B.Tech Chemical Engineering**
- **M.Tech Chemical Engineering**
- **Ph.D**

B.Tech CHEMICAL Engineering

Programme Educational Objectives

PEO1: Understand and apply the basic principles of science and engineering to modern chemical technology.

PEO2: To inculcate problem solving skills, conduct experiments, analyze and interpret the data.

PEO3: To design processes within realistic constraints such as economic, social, ethical, environment, health and safety conditions.

PEO4: To provide opportunities to students to engage in professional societies, and help them to acquire new skills to stay connected with today's fast progressing environment.

PEO5: To provide awareness in critical thinking, environmental, ethical and professional practice including improving communication skills.

Programme Outcomes

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

P10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

P11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOME's

PSO1: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.

PSO2: Execute the chemical engineering principles and modern engineering tools to conduct experiments or design a system for developing quality chemical processes by considering the cost, safety and environmental aspects.

M.Tech CHEMICAL Engineering

***Programme* Educational Objectives**

PEO1: Acquire comprehensive knowledge in Chemical Engineering and research capabilities.

PEO2: Analyze and solve using Chemical Engineering principles and modern engineering tools to conduct experiments for improving the quality of the chemical processes.

PEO3: Design processes within realistic constraints such as economic, social, ethical, environment, health and safety conditions.

PEO4: Provide opportunities to students to engage in professional societies, and help them to acquire new skills to stay connected with today's fast progressing environment.

PEO5: Empower students to become entrepreneurs for Chemical industries.

Programme Outcomes

PO1: Independently carry out research /investigation and development work to solve practical problems.

PO2: Write and present a substantial technical report/document.

PO3: Demonstrate a degree of proficiency over the area as per the specialization of the program. The proficiency should be at a level higher than the requirements in the appropriate bachelor program

PO4: Potential to analyze solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety.

PO5: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO6: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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